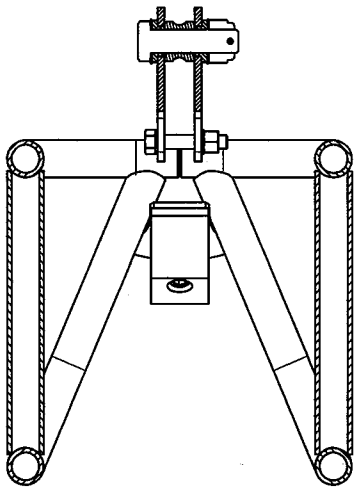
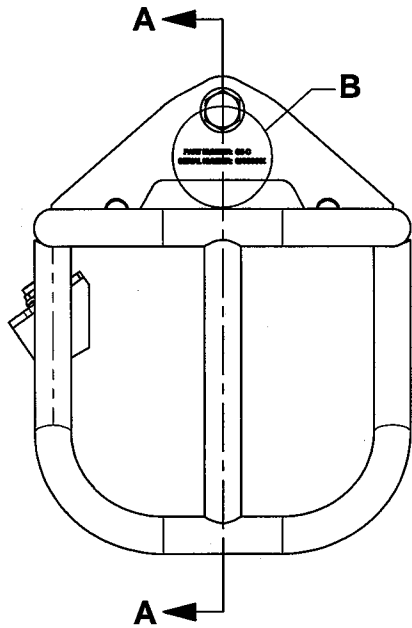
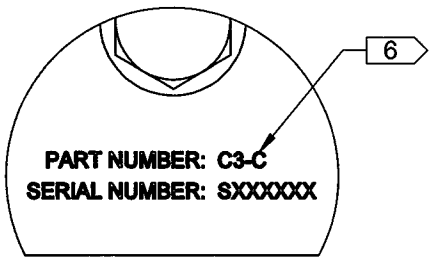


ITEM #	QTY	PART #	PART TITLE
-1	1	C3-C-1	C3 CAGE WELDMENT
-8	1	C3-C-8	LIFTING BUSHING
-15	1	C3-C-15	BUMPER ASSY
16	2	AN6-17A	CAD. PLATED STEEL HEX BOLT 3/8"-24 X 1.313" GRIP LG. X 1.953" LG.
17	1	AN10-22	CAD. PLATED STEEL HEX BOLT 5/8"-18 X 1.438" GRIP LG. X 2.391" LG.
18	1	AN310-10	CAD. PLATED STEEL CASTELLATED HEX NUT 5/8"-18 X 23/32" HT.
19	1	MS21042-6	CAD. PLATED STEEL SELF-LOCKING NUT 3/8"-24 X 0.275" HT.
20	2	MS21044N6	CAD. PLATED STEEL SELF-LOCKING HEX NUT 3/8"-24 X 0.394" HT.
21	1	MS24665-355	CAD. PLATED STEEL COTTER PIN 1/8" DIA. X 1-1/4" LG.
22	6	NAS1149F0663P	CAD. PLATED STEEL WASHER 0.390" ID. X 0.625" OD. X 0.063" THK.
23	2	NAS1149F1032P	CAD. PLATED STEEL WASHER 0.640" ID. X 1.188" OD. X 0.063" THK.
24	1	NAS1351-6-28	BLACK OXIDE STEEL SOCKET HEAD CAP SCREW 3/8"-24 X 1.75" LG.

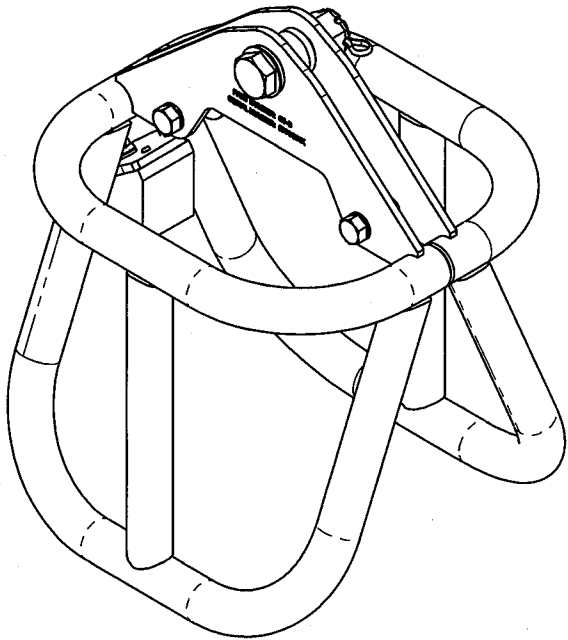


SECTION A-A



PART NUMBER: C3-C
SERIAL NUMBER: SXXXXXX

DETAIL B

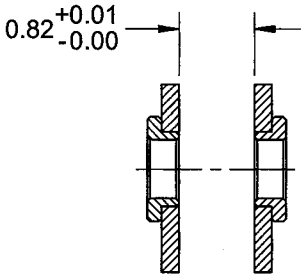


C3-C C3 CAGE

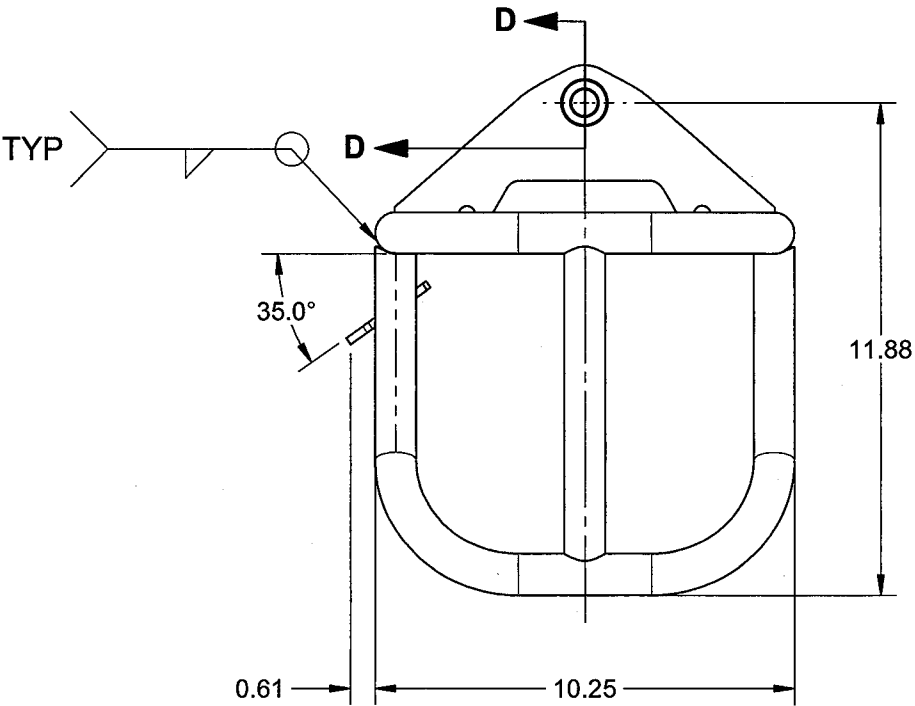
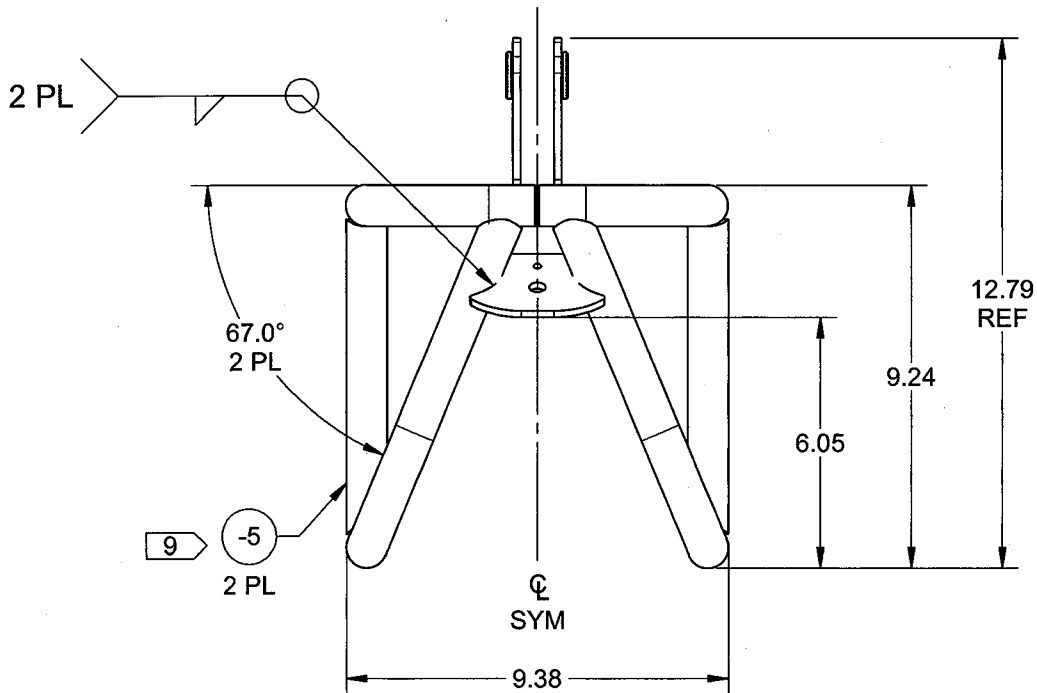
- NOTES:
- 1) MATERIAL: N/A
 - 2) HEAT TREAT: N/A
 - 3) FINISH: N/A
 - 4) TOLERANCES: X.X = +/- 0.1" / +/- 1°
X.XX = +/- 0.01" / +/- 0.5°
X.XXX = +/- 0.005" / +/- 0.1°
X.XXXX = +/- 0.0005" / +/- 0.05°
PARALLELISM, ECCENTRICITY AND SYMMETRY ABOUT ALL CENTER LINES = +/- 0.005"
 - 5) UNITS: INCHES UNLESS OTHERWISE NOTED
 - 6) IDENTIFICATION: X-TENSION STAMP T/N AND S/N, AS SHOWN, PER QSI 044 SECTION 6.2
 - 7) ASSEMBLE AS SHOWN
 - 8) TORQUE ITEM 19 TO 13-16 FT-LBS (160-190 IN-LBS)
 - 9) INSTALL ITEM 18 AND ITEM 20 HAND TIGHT
 - 10) DO NOT FOLD COTTER PIN

SEE PREVIOUS REVISION FOR MORE INFORMATION REVISED NOTES FOR TOP LEVEL ASSEMBLY -1 REVISED NOTES AND WELDING SYMBOLS. MOVED T/N AND S/N ENGRAVING TO TOP LEVEL ASSEMBLY. FINISH WAS POWDERCOAT RED IS PRIME AND PAINT RED. REMOVED 0.03 SYMMETRIC TOLERANCES. ADDED 0.61 DIM -2 DIM WAS 2.87 IS 2.80. DIM WAS 0.14 IS 0.07. DIM WAS 3.59 IS 3.59 REF. DIM WAS 5.75 IS 5.750. REMOVED 3.47, 3.22, 3.51 2 PL, 0.53 2 PL, AND 13.2° 2 PL DIMS -3 REMOVED 3.25 AND 1.19 DIMS. REMOVED FLAT PATTERN. ADDED 10.25 DIM -4 REMOVED 3.25, 5.69, 8.69 2 PL DIMS. REMOVED FLAT PATTERN. ADDED 10.25 AND 8.74 DIMS -8 REMOVED 0.22 2 PL DIM. ADDED 0.37 DIM -9 DIM WAS 1.63 IS 1.63 REF. REMOVED 0.62 DIM. ADDED 1.00 DIM -15 ITEM 25 WAS MS16555-640 IS MS16555-641		19-1198	KPT
REV.	DESCRIPTION	ECN #	BY
DESIGN	VM	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	KPT		
CHECKED	ZF	TOOL PART #	REV. K
MFG. APPR.	DP	C3-C	SHEET 1 OF 12
APPROVED	WJ	TITLE	SCALE
		C3 CAGE	NTS
DATE	2019-11-06	COPYRIGHT © 2019 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	

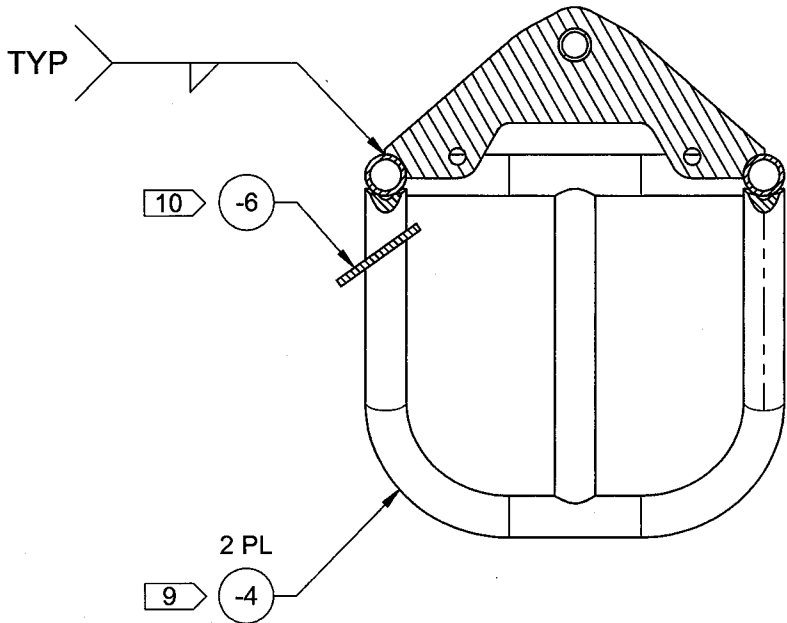
ITEM #	QTY	PART #	PART TITLE
-2	2	C3-C-2	LIFTING PLATE
-3	2	C3-C-3	TOP SEMI-RING
-4	2	C3-C-4	SIDE LOOP
-5	2	C3-C-5	STIFFENER BAR
-6	1	C3-C-6	BUMPER BRACKET
-7	2	C3-C-7	BOSS



SECTION D-D



C3-C-1 C3 CAGE WELDMENT



SECTION C-C

- NOTES:
- 1) MATERIAL: N/A
 - 2) HEAT TREAT: N/A
 - 3) FINISH: PRIME AND PAINT RED AS PER QSI 005 SECTION 4.2.2
 - 4) TOLERANCES: X.X = +/- 0.1" / +/- 1°
X.XX = +/- 0.01" / +/- 0.5°
X.XXX = +/- 0.005" / +/- 0.1°
X.XXXX = +/- 0.0005" / +/- 0.05°
PARALLELISM, ECCENTRICITY AND SYMMETRY ABOUT ALL CENTER LINES = +/-0.005"
 - 5) UNITS: INCHES UNLESS OTHERWISE NOTED
 - 6) IDENTIFICATION: N/A
 - 7) ASSEMBLE AS SHOWN
 - 8) REMOVE ALL SHARP EDGES, BURRS, AND WELD SPATTERS
 - 9) NOTCH ENDS OF ITEMS -4 AND -5 AS REQUIRED, PRIOR TO WELDING
 - 10) TRIM ITEM -6 AS REQUIRED TO MATCH PROFILE OF ITEM -4, PRIOR TO WELDING

DESIGN	VM	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	KPT		
CHECKED	ZF	TOOL PART #	REV. K
MFG. APPR.	DP	C3-C	SHEET 3 OF 12
APPROVED		TITLE	SCALE
		C3 CAGE	NTS
DATE	2019-11-06	COPYRIGHT © 2019 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	

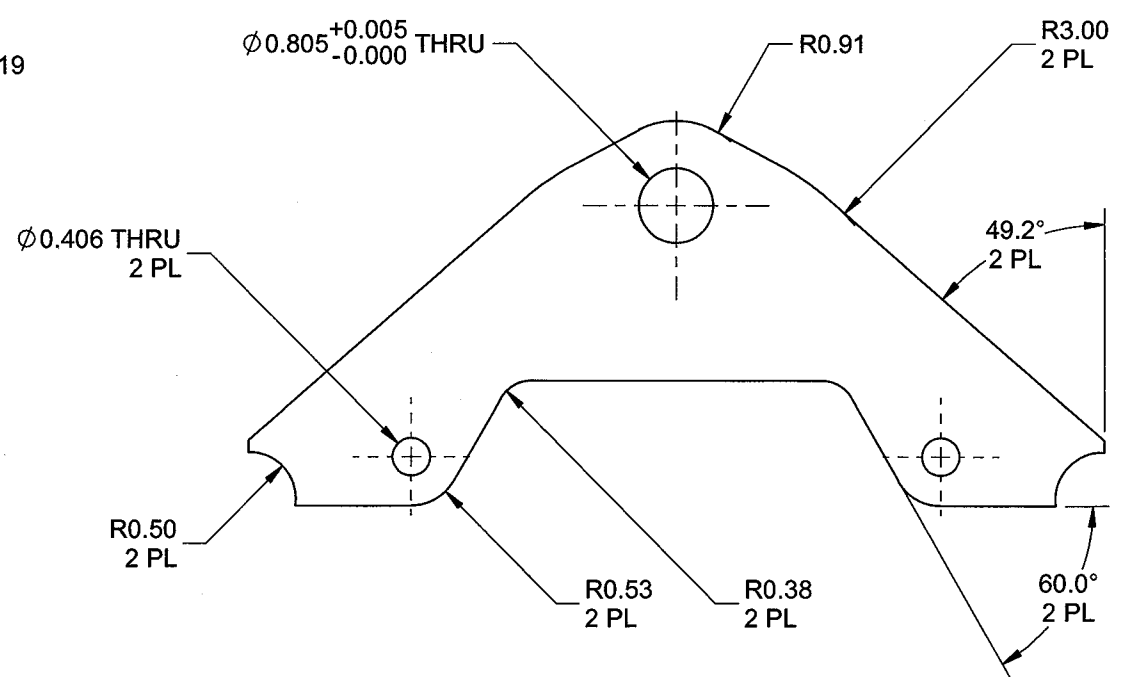
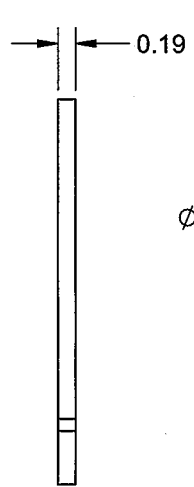
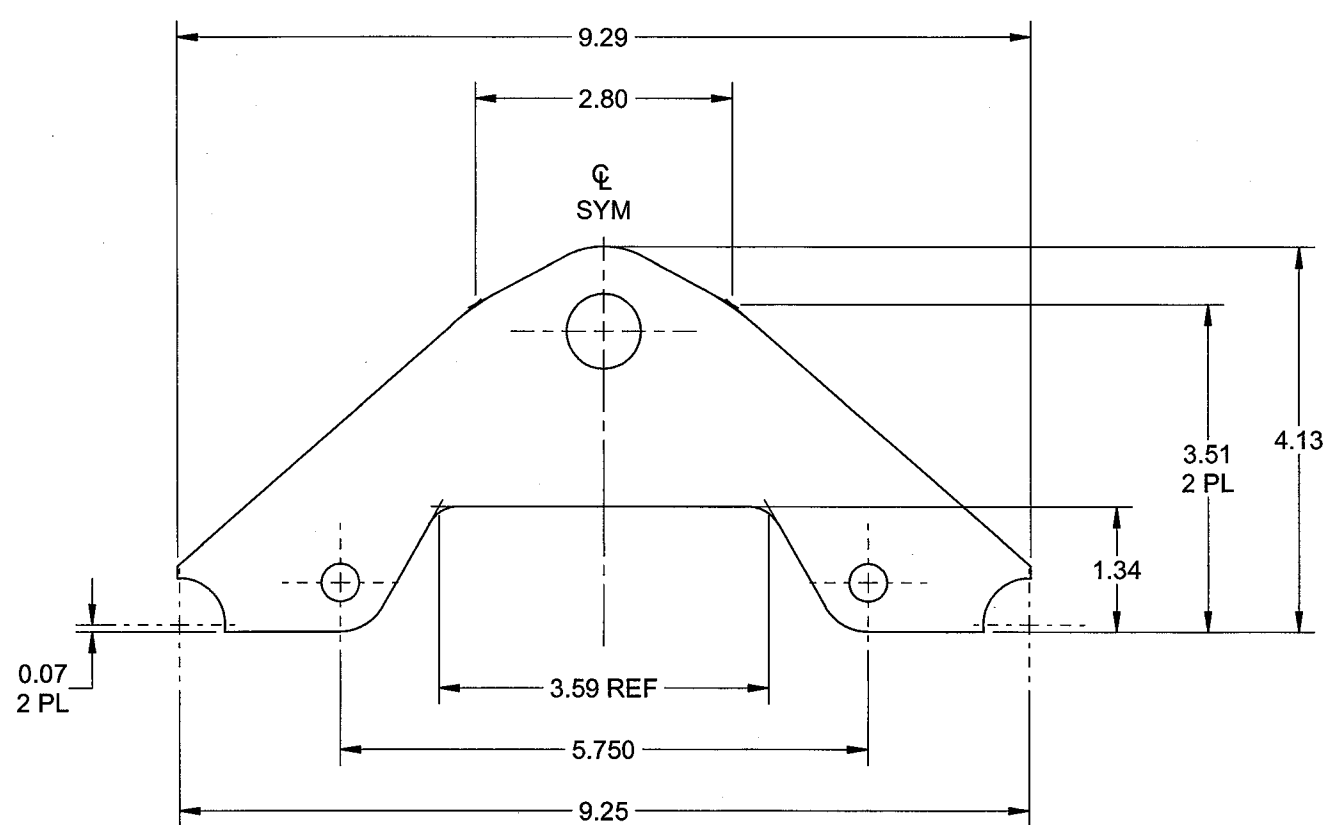
8 7 6 5 4 3 2 1

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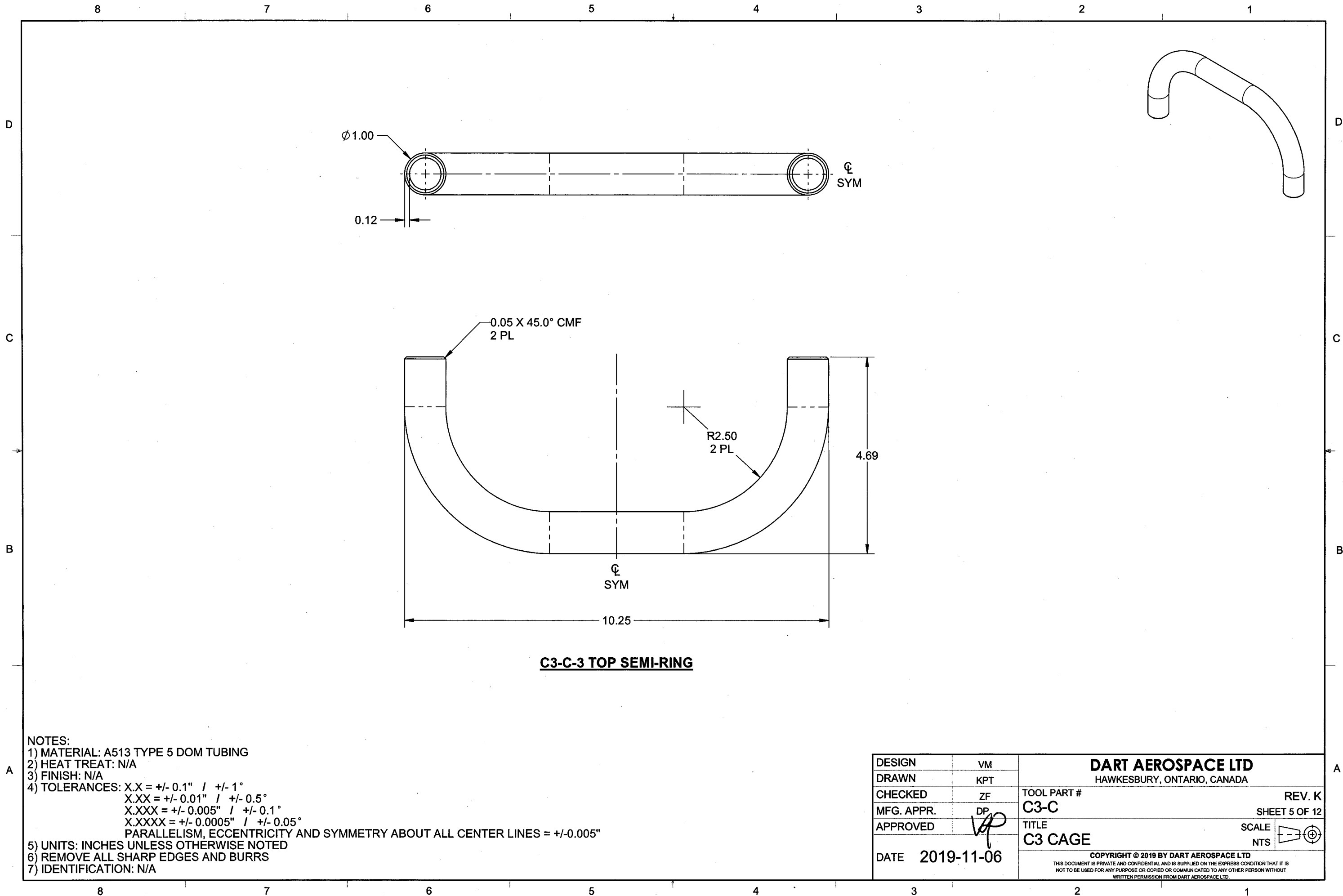


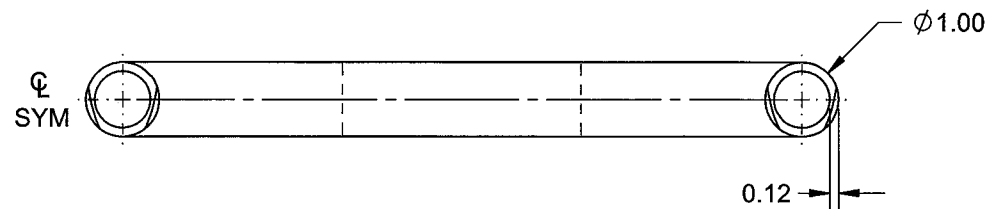
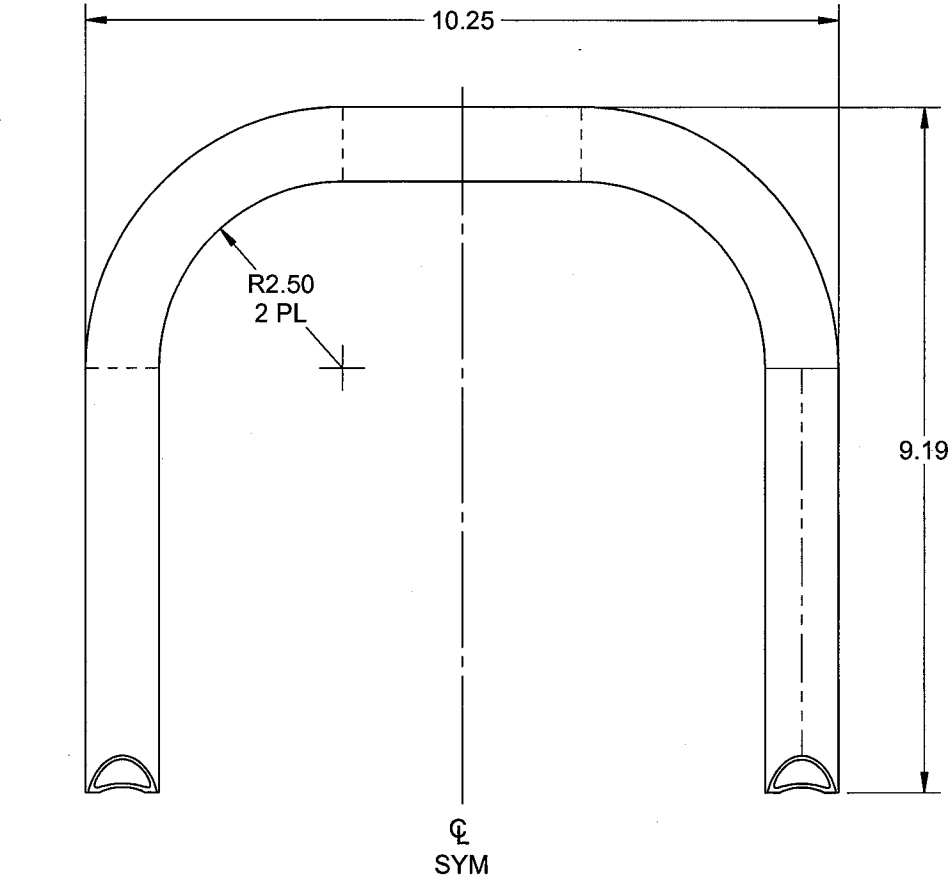
C3-C-2 LIFTING PLATE

- NOTES:
- 1) MATERIAL: 1018/1020/1025 CR
 - 2) HEAT TREAT: N/A
 - 3) FINISH: N/A
 - 4) TOLERANCES: X.X = +/- 0.1" / +/- 1°
X.XX = +/- 0.01" / +/- 0.5°
X.XXX = +/- 0.005" / +/- 0.1°
X.XXXX = +/- 0.0005" / +/- 0.05°
PARALLELISM, ECCENTRICITY AND SYMMETRY ABOUT ALL CENTER LINES = +/- 0.005"
 - 5) UNITS: INCHES UNLESS OTHERWISE NOTED
 - 6) REMOVE ALL SHARP EDGES AND BURRS
 - 7) IDENTIFICATION: N/A

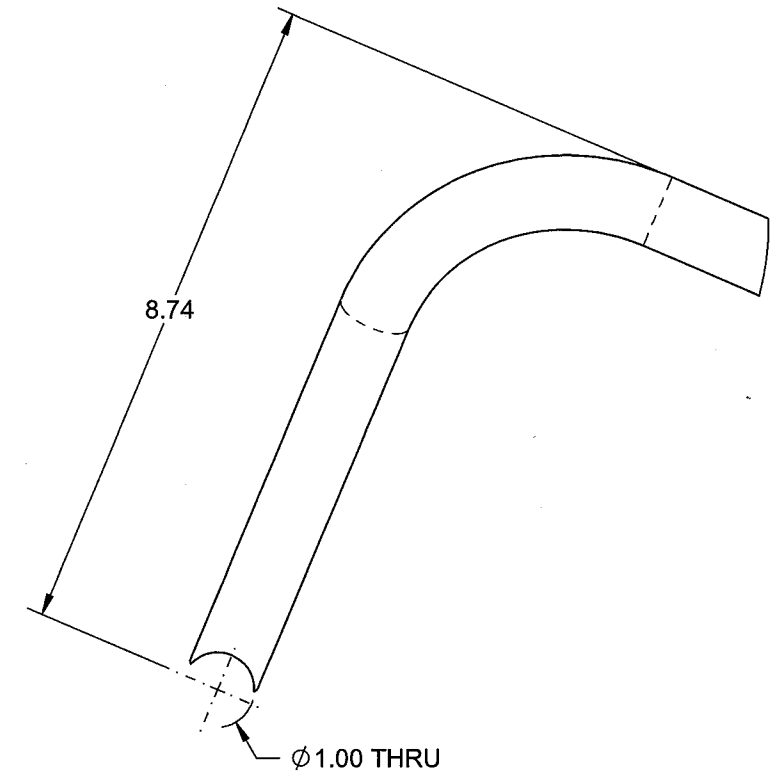
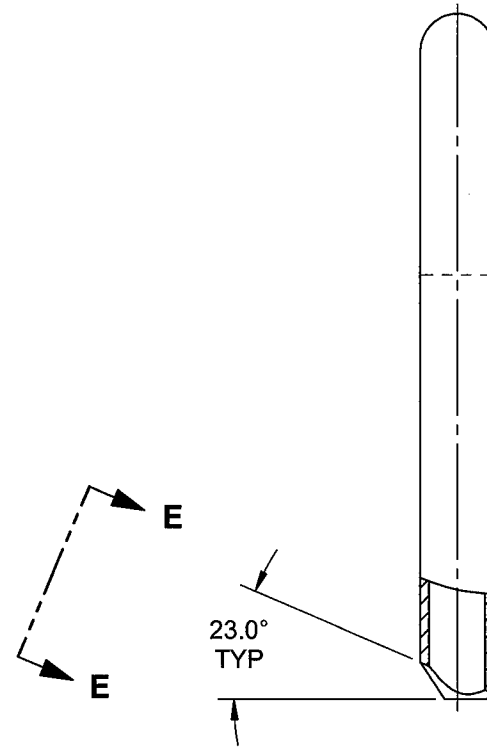
DESIGN	VM	DART AEROSPACE LTD	
DRAWN	KPT	HAWKESBURY, ONTARIO, CANADA	
CHECKED	ZF	TOOL PART #	REV. K
MFG. APPR.	DP	C3-C	SHEET 4 OF 12
APPROVED		TITLE	SCALE
DATE 2019-11-06		C3 CAGE	NTS
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8 7 6 5 4 3 2 1





C3-C-4 SIDE LOOP



VIEW E-E
2 PL

- NOTES:
- 1) MATERIAL: A513 TYPE 5 DOM TUBING
 - 2) HEAT TREAT: N/A
 - 3) FINISH: N/A
 - 4) TOLERANCES: X.X = $\pm 0.1"$ / $\pm 1^\circ$
X.XX = $\pm 0.01"$ / $\pm 0.5^\circ$
X.XXX = $\pm 0.005"$ / $\pm 0.1^\circ$
X.XXXX = $\pm 0.0005"$ / $\pm 0.05^\circ$
PARALLELISM, ECCENTRICITY AND SYMMETRY ABOUT ALL CENTER LINES = $\pm 0.005"$
 - 5) UNITS: INCHES UNLESS OTHERWISE NOTED
 - 6) REMOVE ALL SHARP EDGES AND BURRS
 - 7) IDENTIFICATION: N/A

DESIGN	VM	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	KPT		
CHECKED	ZF	TOOL PART #	REV. K
MFG. APPR.	DP	C3-C	SHEET 6 OF 12
APPROVED		TITLE	SCALE
		C3 CAGE	NTS
DATE	2019-11-06	<small>COPYRIGHT © 2019 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.</small>	

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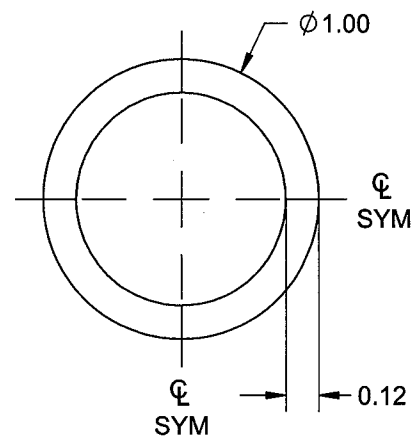
D

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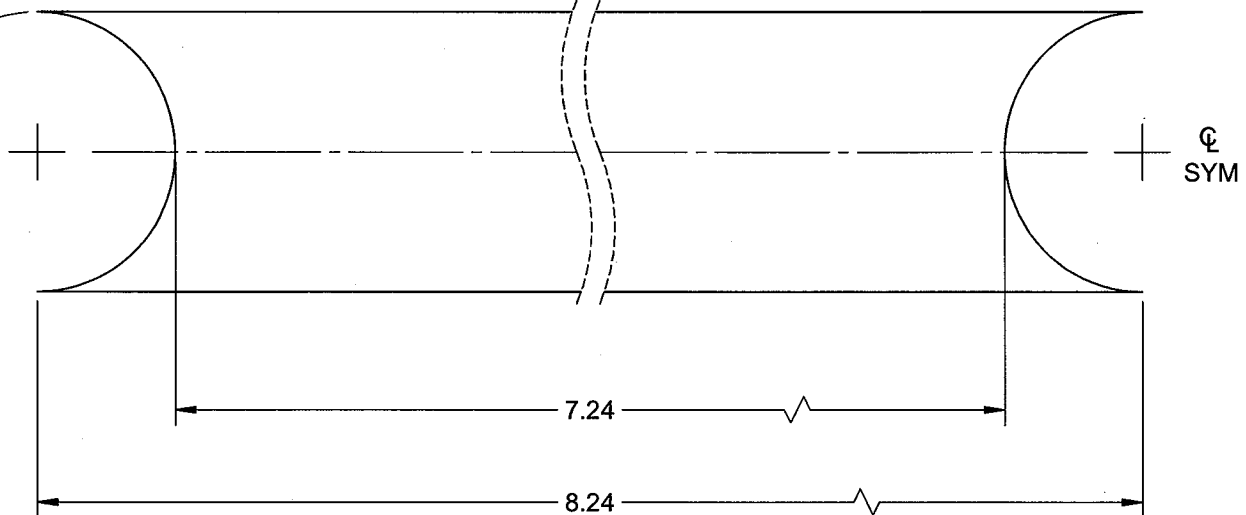
C

B

B

**C3-C-5 STIFFENER BAR**

Ø1.00 THRU
2 PL

**NOTES:**

1) MATERIAL: A513 TYPE 5 DOM TUBING

2) HEAT TREAT: N/A

3) FINISH: N/A

4) TOLERANCES: X.X = +/- 0.1" / +/- 1°

X.XX = +/- 0.01" / +/- 0.5°

X.XXX = +/- 0.005" / +/- 0.1°

X.XXXX = +/- 0.0005" / +/- 0.05°

PARALLELISM, ECCENTRICITY AND SYMMETRY ABOUT ALL CENTER LINES = +/- 0.005"

5) UNITS: INCHES UNLESS OTHERWISE NOTED

6) REMOVE ALL SHARP EDGES AND BURRS

7) IDENTIFICATION: N/A

DESIGN	VM	DART AEROSPACE LTD	
DRAWN	KPT	HAWKESBURY, ONTARIO, CANADA	
CHECKED	ZF	TOOL PART #	REV. K
MFG. APPR.	DP	C3-C	SHEET 7 OF 12
APPROVED	WJ	TITLE	SCALE
		C3 CAGE	NTS
DATE	2019-11-06	COPYRIGHT © 2019 BY DART AEROSPACE LTD	
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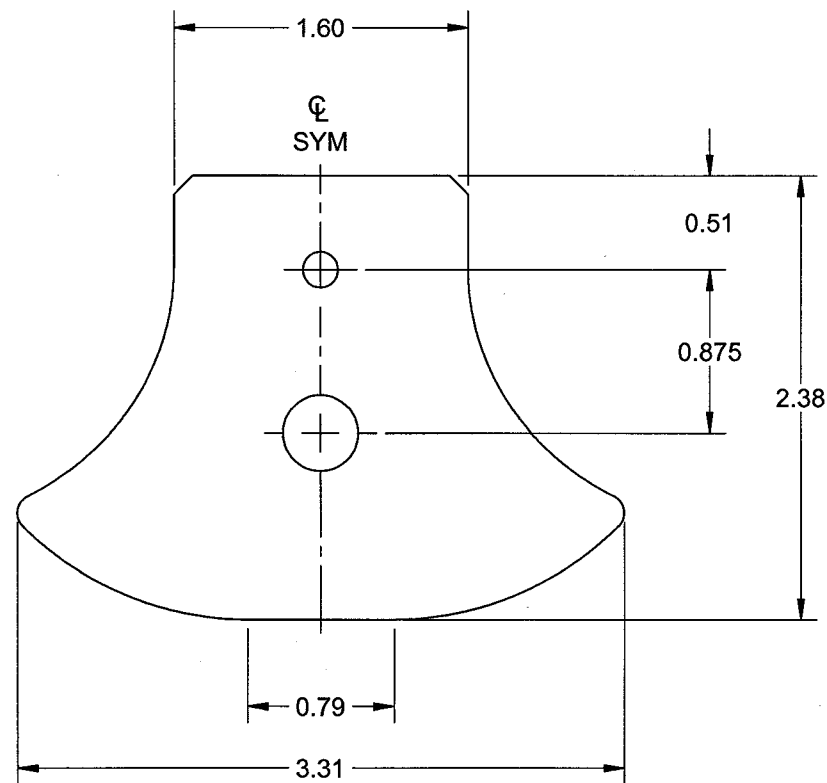
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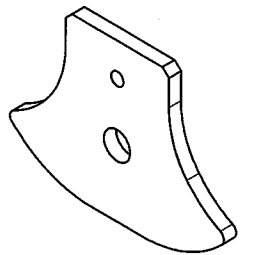
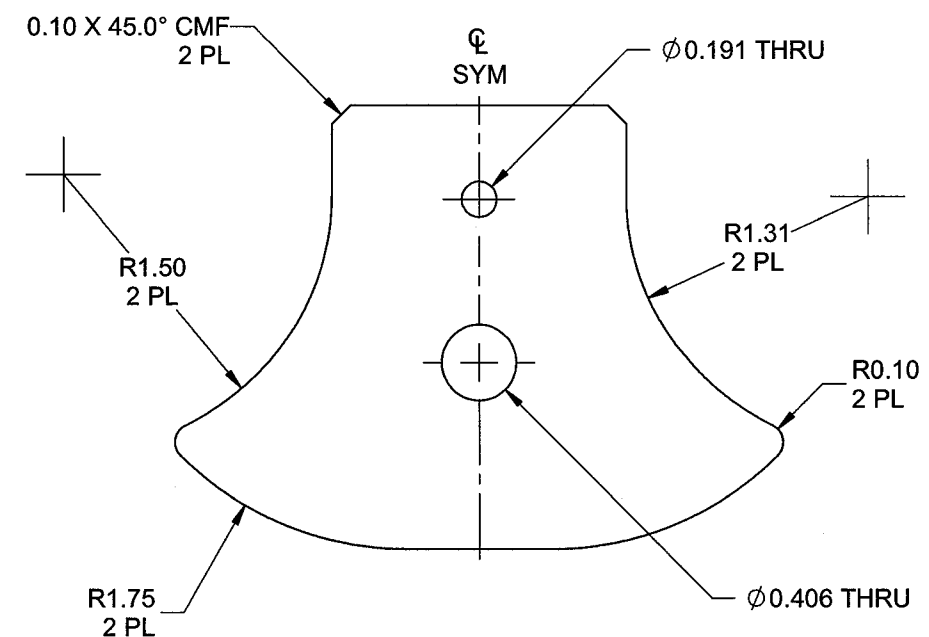
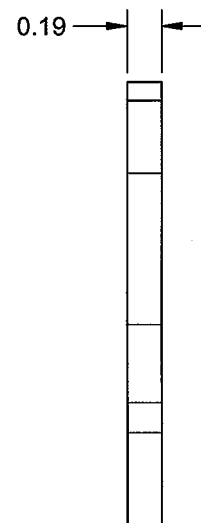
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1



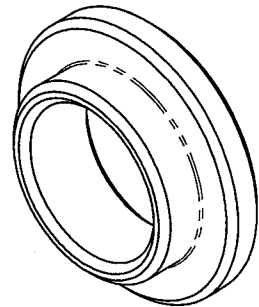
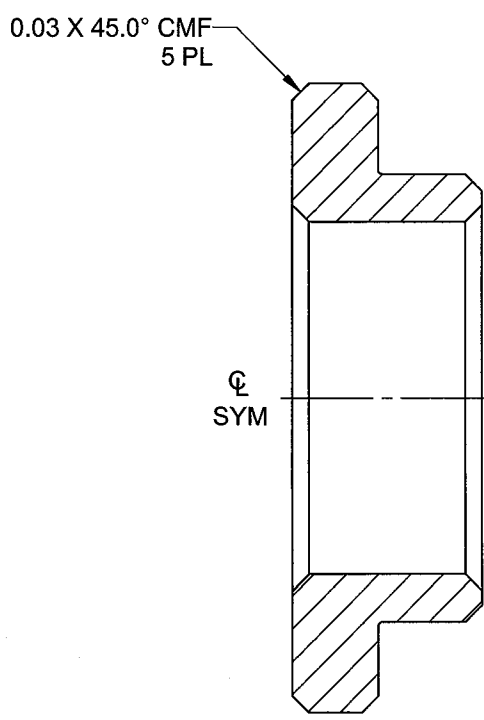
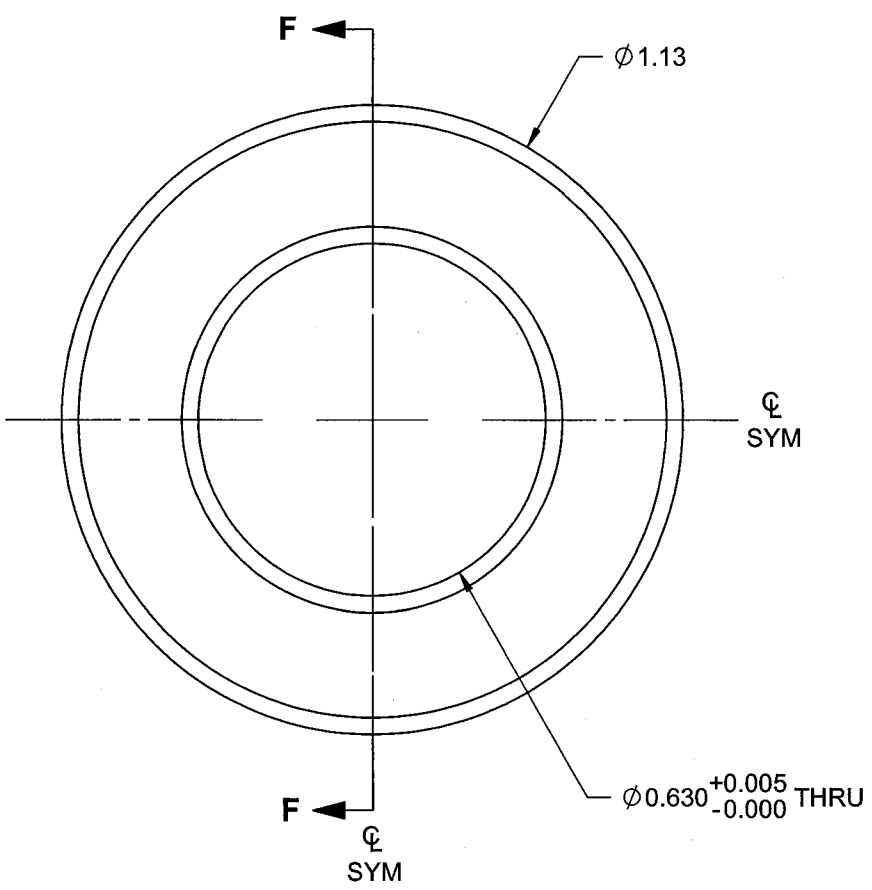
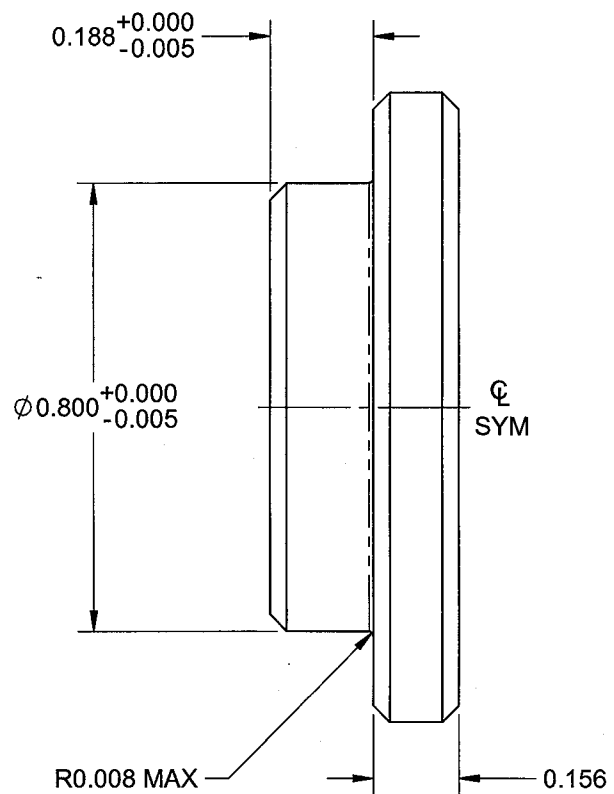
C3-C-6 BUMPER BRACKET

8



- NOTES:
- 1) MATERIAL: 1018/1020/1025 CR
 - 2) HEAT TREAT: N/A
 - 3) FINISH: N/A
 - 4) TOLERANCES: X.X = +/- 0.1" / +/- 1°
X.XX = +/- 0.01" / +/- 0.5°
X.XXX = +/- 0.005" / +/- 0.1°
X.XXXX = +/- 0.0005" / +/- 0.05°
PARALLELISM, ECCENTRICITY AND SYMMETRY ABOUT ALL CENTER LINES = +/- 0.005"
 - 5) UNITS: INCHES UNLESS OTHERWISE NOTED
 - 6) REMOVE ALL SHARP EDGES AND BURRS
 - 7) IDENTIFICATION: N/A
 - 8) ALL NON-DIMENSIONED FEATURES MUST MAINTAIN A TOLERANCE OF +/- 0.01" PER CAD FILE C3-C-6 REV. K.STEP

DESIGN	VM	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	KPT		
CHECKED	ZF	TOOL PART #	REV. K
MFG. APPR.	DP	C3-C	SHEET 8 OF 12
APPROVED	<i>[Signature]</i>	TITLE	SCALE
		C3 CAGE	NTS
DATE	2019-11-06	<small>COPYRIGHT © 2019 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.</small>	

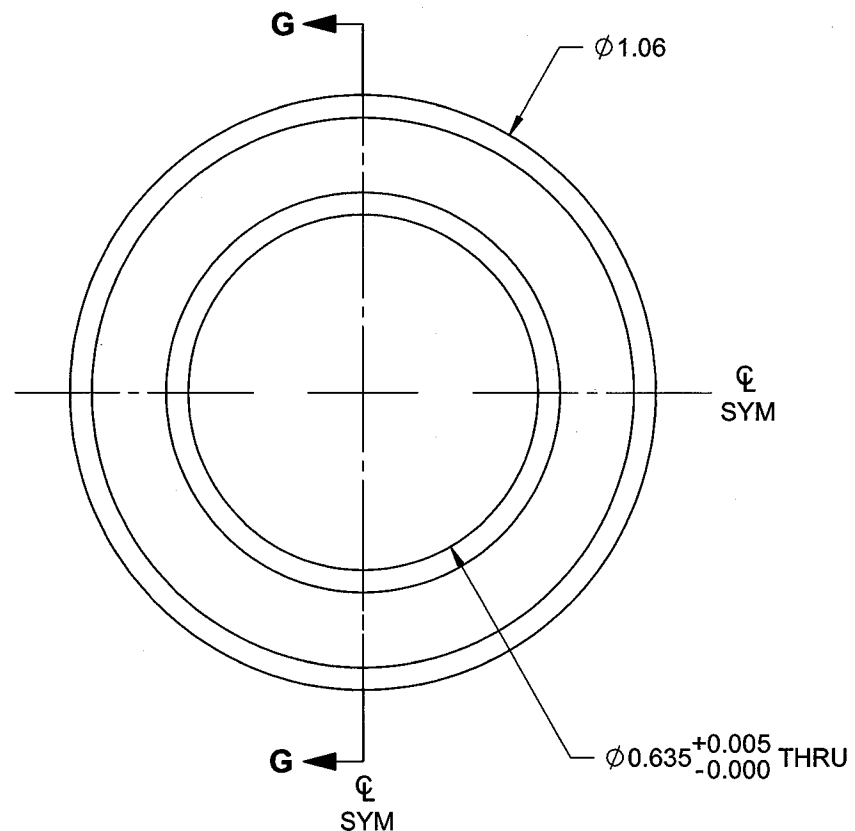


C3-C-7 BOSS

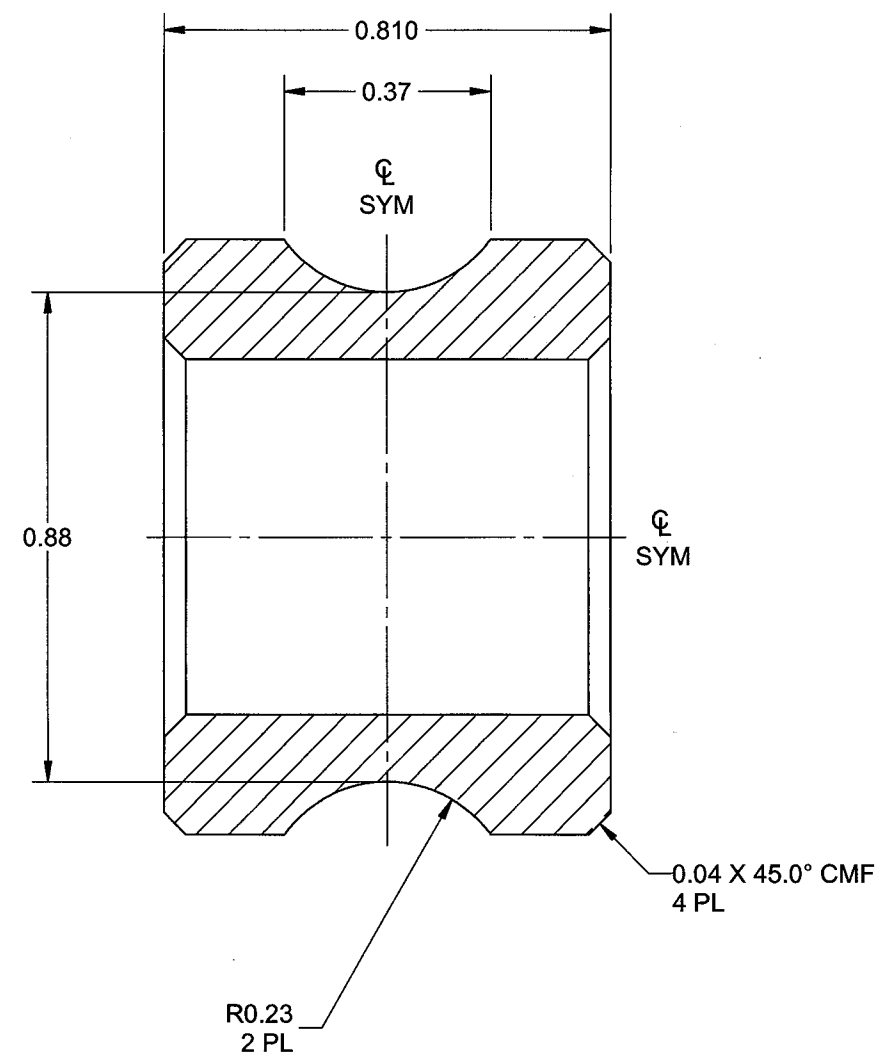
SECTION F-F

NOTES:
1) MATERIAL: 1018/1020/1025 CR
2) HEAT TREAT: N/A
3) FINISH: N/A
4) TOLERANCES: X.X = +/- 0.1" / +/- 1°
X.XX = +/- 0.01" / +/- 0.5°
X.XXX = +/- 0.005" / +/- 0.1°
X.XXXX = +/- 0.0005" / +/- 0.05°
PARALLELISM, ECCENTRICITY AND SYMMETRY ABOUT ALL CENTER LINES = +/- 0.005"
5) UNITS: INCHES UNLESS OTHERWISE NOTED
6) REMOVE ALL SHARP EDGES AND BURRS
7) IDENTIFICATION: N/A

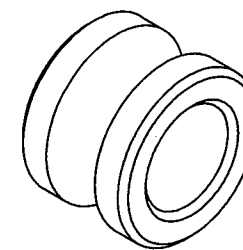
DESIGN	VM	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	KPT		
CHECKED	ZF	TOOL PART #	REV. K
MFG. APPR.	DP	C3-C	SHEET 9 OF 12
APPROVED	<i>VP</i>	TITLE	SCALE
		C3 CAGE	NTS
DATE	2019-11-06	COPYRIGHT © 2019 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	



C3-C-8 LIFTING BUSHING



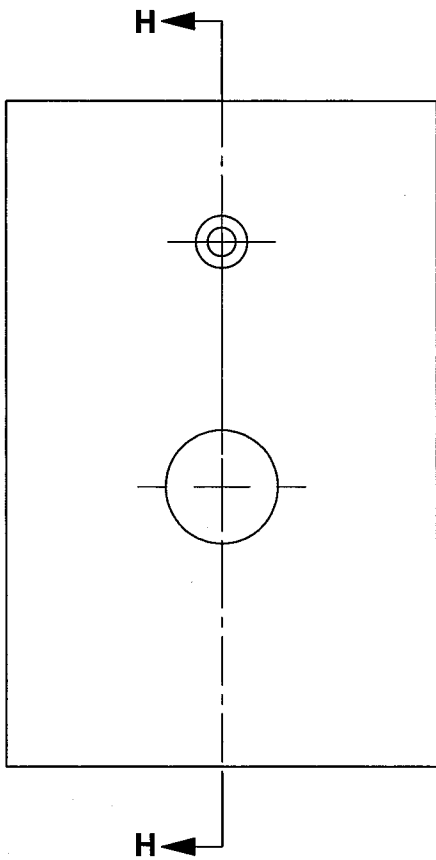
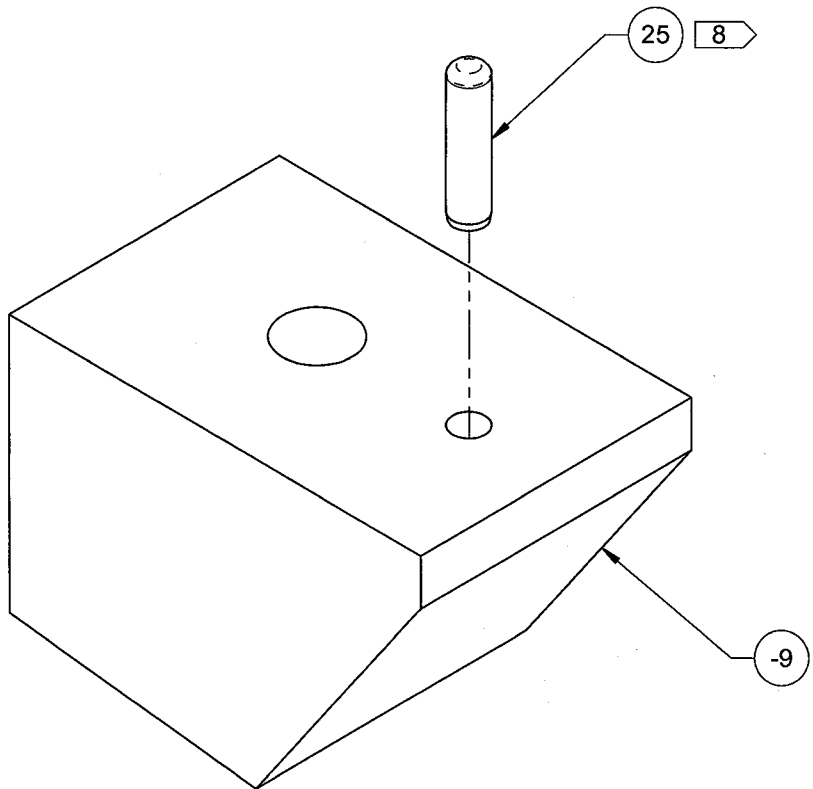
SECTION G-G



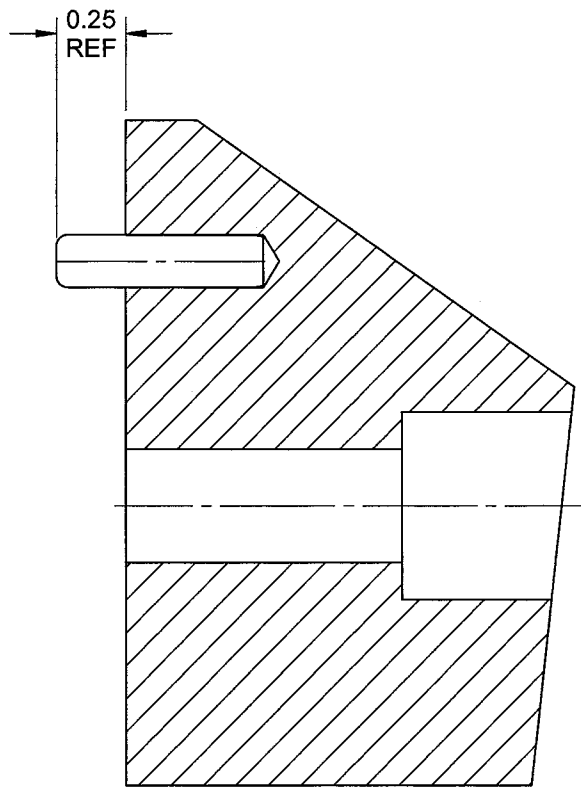
- NOTES:
- 1) MATERIAL: 4140 (28-32 RC)
 - 2) HEAT TREAT: N/A
 - 3) FINISH: NICKEL PLATE PER MIL-C-26074 CLASS 2 GRADE B OR QQ-N-290A CLASS 2 GRADE E
 - 4) TOLERANCES: X.X = +/- 0.1" / +/- 1°
 X.XX = +/- 0.01" / +/- 0.5°
 X.XXX = +/- 0.005" / +/- 0.1°
 X.XXXX = +/- 0.0005" / +/- 0.05°
 PARALLELISM, ECCENTRICITY AND SYMMETRY ABOUT ALL CENTER LINES = +/- 0.005"
 - 5) UNITS: INCHES UNLESS OTHERWISE NOTED
 - 6) REMOVE ALL SHARP EDGES AND BURRS
 - 7) IDENTIFICATION: N/A

DESIGN	VM	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	KPT		
CHECKED	ZF	TOOL PART #	REV. K
MFG. APPR.	DP	C3-C	SHEET 10 OF 12
APPROVED		TITLE	SCALE
		C3 CAGE	NTS
DATE	2019-11-06	COPYRIGHT © 2019 BY DART AEROSPACE LTD <small>THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.</small>	

ITEM #	QTY	PART #	PART TITLE
-9	1	C3-C-9	BUMPER
25	1	MS16555-641	SS DOWEL PIN 3/16" DIA. X 3/4" LG.





C3-C-15 BUMPER ASSY



SECTION H-H

- NOTES:
- 1) MATERIAL: N/A
 - 2) HEAT TREAT: N/A
 - 3) FINISH: N/A
 - 4) TOLERANCES: X.X = +/- 0.1" / +/- 1°
X.XX = +/- 0.01" / +/- 0.5°
X.XXX = +/- 0.005" / +/- 0.1°
X.XXXX = +/- 0.0005" / +/- 0.05°
PARALLELISM, ECCENTRICITY AND SYMMETRY ABOUT ALL CENTER LINES = +/- 0.005"
 - 5) UNITS: INCHES UNLESS OTHERWISE NOTED
 - 6) IDENTIFICATION: N/A
 - 7) ASSEMBLE AS SHOWN
 - 8) APPLY RETAINING COMPOUND LOCTITE 620 OR EQUIVALENT ON MATING SURFACES
THEN PRESS FIT ITEM 25 WITH ITEM -9, AND REMOVE EXCESS

DESIGN	VM	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	KPT		
CHECKED	ZF	TOOL PART #	REV. K
MFG. APPR.	DR	C3-C	SHEET 11 OF 12
APPROVED		TITLE	SCALE
		C3 CAGE	NTS 
DATE	2019-11-06	COPYRIGHT © 2019 BY DART AEROSPACE LTD <small>THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.</small>	

8

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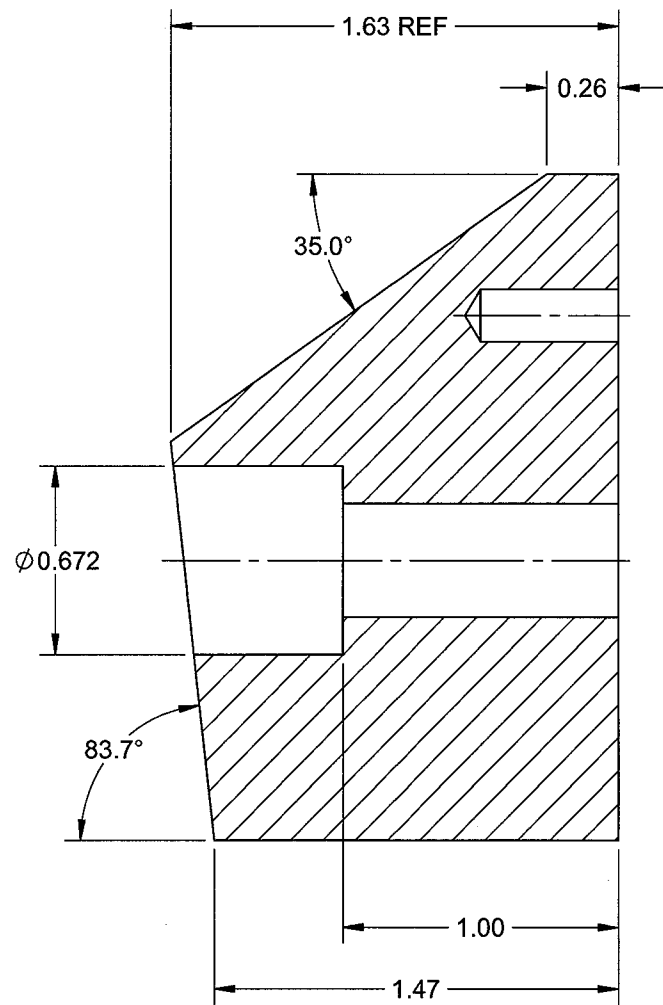
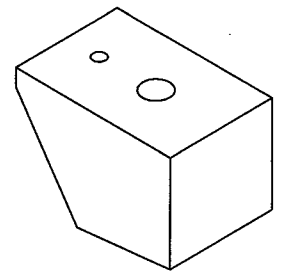
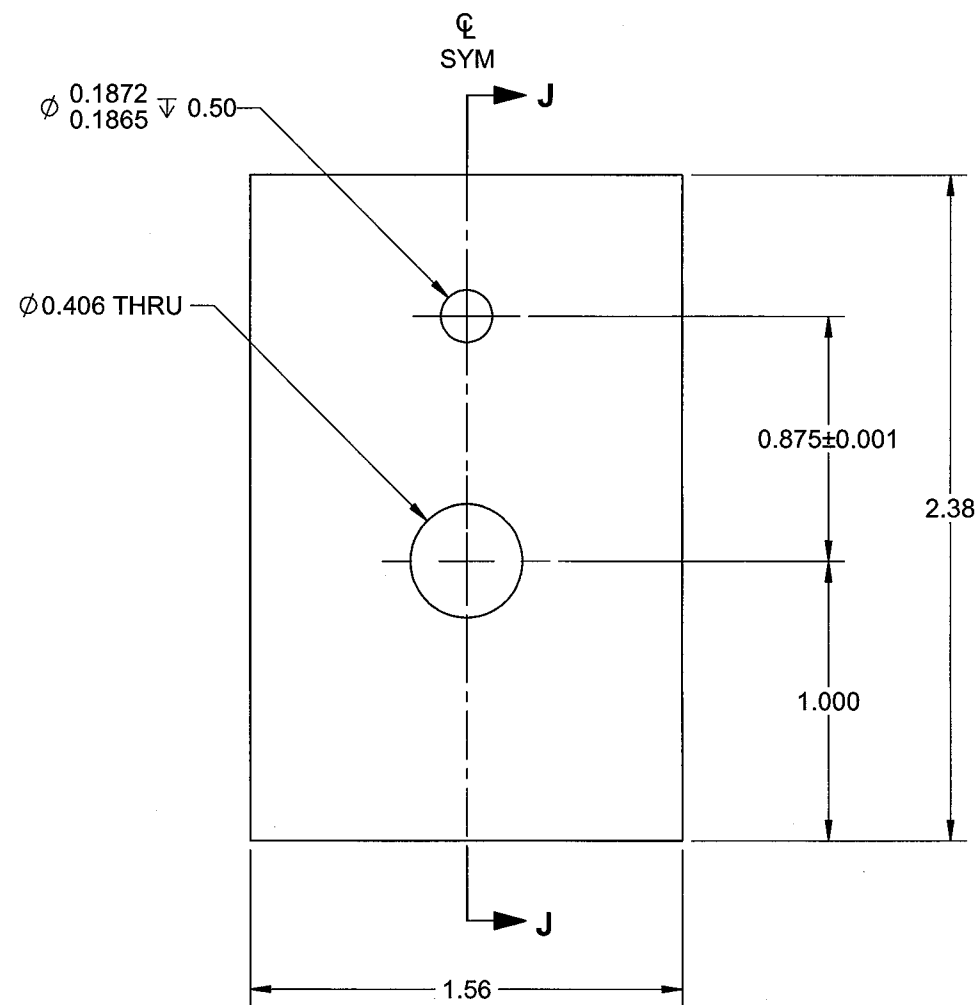
5

4

3

2

1

**SECTION J-J****C3-C-9 BUMPER****NOTES:**

1) MATERIAL: UHMW

2) HEAT TREAT: N/A

3) FINISH: N/A

4) TOLERANCES: X.X = +/- 0.1" / +/- 1°

X.XX = +/- 0.01" / +/- 0.5°

X.XXX = +/- 0.005" / +/- 0.1°

X.XXXX = +/- 0.0005" / +/- 0.05°

PARALLELISM, ECCENTRICITY AND SYMMETRY ABOUT ALL CENTER LINES = +/- 0.005"

5) UNITS: INCHES UNLESS OTHERWISE NOTED

6) REMOVE ALL SHARP EDGES AND BURRS

7) IDENTIFICATION: N/A

DESIGN	VM	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	KPT		
CHECKED	ZF	TOOL PART #	REV. K
MFG. APPR.	DP	C3-C	SHEET 12 OF 12
APPROVED		TITLE	SCALE
		C3 CAGE	NTS
DATE	2019-11-06	COPYRIGHT © 2019 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	